

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A device comprising:
a receiver configured to utilize a random access communications protocol, comprising,
a channel detector configured to determine an available frequency,
a filter circuit, and
a controller configured to set the filter circuit to pass the available frequency.
2. (Withdrawn) The device according to Claim 1, wherein the device utilizes the 802.11 protocol.
3. (Withdrawn) The device according to Claim 1, wherein the filter circuit includes at least one passband filter that includes the available frequency.
4. (Withdrawn) The device according to Claim 3, wherein the passband filter comprises a filter that passes a band of 802.11 regulated frequencies.
5. (Withdrawn) The device according to Claim 1, wherein the filter circuit comprises a filter module detachably coupled to the receiver.
6. (Withdrawn) The device of Claim 1, wherein the controller is configured to select a RF filter having the available frequency from a plurality of RF filters.
7. (Withdrawn) The device of Claim 1, wherein the filter circuit comprises a plurality of RF filters each having a different passband.

8. (Withdrawn) The device of Claim 1, wherein the filter circuit comprises at least two RF filters each passing a different frequency.

9. (Withdrawn) The device of Claim 1, wherein the filter circuit is configurable to provide a plurality of frequency filters each having a range respectively defined by one of a plurality of frequency channels.

10. (Withdrawn) The device of Claim 9, wherein the filter circuit is selectively configurable between the plurality of frequency channels.

11. (Withdrawn) The device according to Claim 1, further comprising a transmitter, wherein the device is configured for simultaneous transmission and reception.

12. (Withdrawn) The device according to Claim 1, wherein the random access protocol is one of CSMA and DCF.

13. (Currently Amended) A radio frequency (RF) wireless network, comprising:

at least two RF transceiver circuits configured to utilize a random access communications protocol;

~~each of the at least two RF transceiver circuits being configured to select between~~ selectively connected to one filter of a plurality of filters, each filter being associated with one frequency channels of a plurality of frequency channels; and

a processor configured to determine different frequency channels ~~from the plurality of frequency channels~~ for each of the ~~at least two~~ RF transceiver circuits.

14. (Currently Amended) The wireless network of Claim 13, wherein each ~~of the at least two~~ RF transceiver circuits comprises ~~a receiver circuit selectable between the plurality of frequency channels~~ a switching circuit for selectively connecting the RF transceiver circuit to a filter associated with a desired frequency channel.

15. (Cancelled)

16. (Cancelled)

17. (Currently Amended) The wireless network of Claim ~~16~~ 13, wherein the random access communications protocol is one of CSMA and DCF.

18. (Original) The wireless network of Claim 13, wherein the plurality of frequency channels are grouped into a plurality of adjacent frequency channels.

19. (Cancelled)

20. (Currently Amended) A method for selecting a radio frequency (RF) signal reception frequency range, the method comprising:

determining available RF frequency ranges from a plurality of RF frequency ranges;

~~configuring~~ selectively connecting a first receiver to a first filter to receive random access communications over a first ~~of the~~ available RF frequency ranges; and

~~configuring~~ selectively connecting a second receiver to a second filter to receive random access communications over a

~~second of the available RF frequency ranges,~~

the first and second filters being chosen from a plurality of filters, each filter of the plurality of filters providing a predetermined RF frequency range.

21. (Original) The method of Claim 20, wherein determining comprises detecting which of the plurality of RF frequency ranges are occupied.

22. (Original) The method of Claim 21, wherein detecting comprises determining if a RF signal is being transmitted or received within at least some of the plurality of RF frequency ranges.

23. (Cancelled)

24. (Currently Amended) The method of Claim ~~23~~ 20, ~~wherein selecting a filter frequency range comprises further comprising:~~
dynamically choosing each of the first and second a filters
from a the plurality of filters, wherein ~~the~~ each of the
plurality of filters includes allows a predetermined frequency
passband ~~that corresponds to the first RF frequency range.~~

25. (Cancelled)

26. (Currently Amended) The method of Claim ~~25~~ 20, ~~wherein selecting a filter frequency range comprises choosing a filter from a plurality of filters, wherein the each filter includes allows a predetermined frequency passband that corresponds to the second RF frequency range.~~

27. (Cancelled)

28. (Original) The method according to Claim 20, wherein the random access communications comprise at least one of CSMA and DCF.

29. (Currently Amended) The method according to Claim ~~22~~ 20, further comprising:

~~the step of~~ configuring at least one of the first and second receivers to receive Orthogonal Frequency Division Multiplexing (OFDM) signals.

30. (Withdrawn) A method of operation of a communication device, comprising the steps of:

determining at least one available frequency sub-band;
configuring the communication device to use one of the available frequency sub-bands; and

configuring an add-on filter to have a passband approximately equal to the one of the available frequency sub-bands.

31. (Withdrawn) The method of Claim 30, wherein:

the communication device comprises a radio card in an RF system having a number of radio cards not greater than a number of frequency sub-bands that may be available.

32. (Withdrawn) The method of Claim 30, wherein:

the add-on filter comprises,
a plurality of filters each passing at least one of the frequency sub-bands,
a switch configured couple a selected one of the plurality of filters to an RF path of the communication device.

33. (Withdrawn) The method of Claim 32, wherein the available frequency sub-bands includes at least one wireless network frequency.

34. (Withdrawn) The method according to Claim 30, wherein the communication device is configured to utilize a random access protocol.

35. (Withdrawn) The method according to Claim 34, wherein the random access protocol comprises one of CSMA and DCF.

36. (Withdrawn) An add-on filter, comprising:
an RF input and an RF output; and
an RF filter mechanism coupled to each of the RF input and RF output and selectably configurable to any one of at least two passbands.

37. (Withdrawn) The add-on filter according to Claim 36, wherein said RF input is a radio card connector.

38. (Withdrawn) The add-on filter according to Claim 36, wherein the RF output is an antenna connector.

39. (Withdrawn) The add-on filter according to Claim 36, wherein the RF output is coupled to an antenna.

40. (Withdrawn) The add-on filter according to Claim 36, wherein:
the RF filter mechanism comprises,
a plurality of filters each passing at least one of the at least two passbands,
an input switch configured to couple an RF path of the RF

input to a selected one of the filters, and

an output switch configured to couple an RF path of the RF output to the selected filter.

41. (Withdrawn) The add-on filter according to Claim 36, wherein the filter is for attaching to a radio using a random access communications protocol.

42. (Withdrawn) The add-on filter according to Claim 41, wherein the random access communications protocol comprises one of CSMA and DCF.

REMARKS

This Amendment is filed in response to the Office Action dated April 19, 2006, which has a shortened statutory period set to expire July 19, 2006.

Entry Of Formal FIGS.3, 4A, 4B, And 5

Applicant submits herewith formal FIGS. 3, 4A, 4B, and 5 and requests entry of these figures. Based on this submission, Applicant requests reconsideration and withdrawal of the objection to FIGS. 3, 4A, 4B, and 5. Please note that the labels in FIG. 5 have been amended to reflect the numbering taught in the Specification.

Claims 13-14, 18, 20-22, And 29 Are Patentable Over Trachewsky

Claim 13, as amended, recites:

each RF transceiver circuit being selectively connected to one filter of a plurality of filters, each filter being associated with one frequency channel of a plurality of frequency channels.

Applicant respectfully submits that Trachewsky fails to disclose or suggest this limitation. For example, Trachewsky teaches multiple processing cards 196, 198, and 200 coupled to RF units 202, 204, and 206, respectively. Paragraph [0052]. Each of baseband processing cards 196, 198, 200 performs digital processing for a different wireless protocol, e.g. 802.11a, 802.11b, and 802.11g. Paragraph [0052]. Paragraphs [0010]-[0014] and FIGS. 4A-4C, cited by the Office Action, teach various embodiments of WLAN devices, some of which allow for selecting a frequency range. Notably, in all described embodiments, Trachewsky fails to teach anything about selectively connecting each RF transceiver circuit to a filter

associated with one frequency channel. Therefore, Applicant requests reconsideration and withdrawal of the rejection of Claim 13.

Claims 14 and 18 depend from Claim 13 and therefore are patentable for at least the reasons presented for Claim 13. Based on those reasons, Applicants request reconsideration and withdrawal of the rejection of Claims 14 and 18.

Moreover, Claim 14, as amended, recites:

a switching circuit for selectively connecting the RF transceiver circuit to a filter associated with a desired frequency channel.

Applicant respectfully submits that Trachewsky also fails to disclose or suggest this limitation. For example, FIGS. 4B-4C teach WLAN devices that can support communication over a plurality of frequency bands simultaneously. Paragraphs [0045]. FIG. 4A teaches a WLAN device having a filter in each of the receive and transmit paths as well as a diversity switch module that is coupled to a Tx/Rx switch and at least one antenna (the antenna implementation depending on the particular standard to which the wireless communication device is compliant). Paragraph [0036]. Because Trachewsky fails to teach anything about the recited switching circuit, Applicant requests further reconsideration and withdrawal of the rejection of Claim 14.

Claim 20, as amended, recites:

selectively connecting a first receiver to a first filter to receive random access communications over a first available RF frequency range; and
selectively connecting a second receiver to a second filter to receive random access communications over a second available RF frequency range,
the first and second filters being chosen from a plurality of filters, each filter of the plurality of filters providing a predetermined RF frequency range.

Applicant respectfully submits that Trachewsky fails to

disclose or suggest this limitation. For example, in paragraphs [0012]-[0014], [0043]-[0045] and FIG. 10, cited by the Office Action, teach various embodiments of WLAN devices, some of which allow for selecting a frequency range. For example, the WLAN interface 324 of FIG. 10 supports 802.11a, 802.11b, and/or 802.11g. Notably, in all described embodiments, Trachewsky fails to teach anything about selectively connecting each receiver to a specific filter thereby allowing communication over a specific RF frequency channel. Therefore, Applicant requests reconsideration and withdrawal of the rejection of Claim 20.

Claims 21-22 and 29 depend from Claim 20 and therefore are patentable for at least the reasons presented for Claim 20. Based on those reasons, Applicant requests reconsideration and withdrawal of the rejection of Claims 21-22 and 29.

Claims 17 And 28 Are Patentable Over Trachewsky

Claim 17 depends from Claim 13 and therefore is patentable for at least the reasons presented for Claim 13. Based on those reasons, Applicant requests reconsideration and withdrawal of the rejection of Claim 17.

Claim 28 depends from Claim 20 and therefore is patentable for at least the reasons presented for Claim 20. Based on those reasons, Applicant requests reconsideration and withdrawal of the rejection of Claim 28.

Claims 24 and 26 Are Patentable Over Trachewsky, The Li Patent, And The Li Publication

Claims 24 and 26 depend from Claim 20 and therefore are patentable for at least the reasons presented for Claim 20. The Li Patent and the Li Publication fails to remedy the deficiency of Trachewsky with respect to Claim 20.

For example, the Li Patent teaches selectively connecting a GSM harmonic filter 122 to one of a receive path (including RF filter 142 and amplifier 162) and a transmit path (including GSM power amplifier 120). Col. 6, lines 46-56 and col. 7, lines 39-54, both describing FIG. 3. Similarly, a DCS harmonic filter 126 can be selectively connected to one of a receive path (including RF filter 140 and amplifier 166) and a transmit path (including DCS power amplifier 124). Col. 6, lines 46-56 and col. 7, lines 39-54, both describing FIG. 3. Notably, the Li Patent fails to teach anything about selectively connecting first and second receivers to first and second filters. That is, each receiver in the Li Patent can only be connected to one harmonic filter. Therefore, the Li Patent fails to teach at least the steps of selectively connecting.

The Li Publication teaches a filter bank 304 (FIG. 3) that generates a plurality of bandpass filter outputs, which are provided to an accumulative sub-band formation 322. Paragraph [0025]. Accumulative sub-band formation 322 generates a set of low-pass filtered signals, each signal having a specific passband. Paragraph [0025]. These low-pass filtered signals are then provided to an accumulative sub-band power estimator/switch control 324. Paragraph [0025]. Accumulative sub-band power estimator/switch control 324 estimates the power in each signal and compares that power to predetermined threshold values to determine if adjacent station interference is present. Paragraph [0026]. If there is adjacent interference, then accumulative sub-band power estimator/switch control 324 sends control signals to selector 326 to select a low pass signal with a smaller passband. Paragraph [0026]. If there is no adjacent interference, then accumulative sub-band power estimator/switch control 324 uses the power estimates to determine if the desired station is a relatively weak station

that requires a different passband than if the station is relatively strong. Paragraph [0026]. Notably, the Li Publication teaches only one receiver.

Because Trachewsky, the Li Patent, and the Li Publication, even when combined, fail to disclose or suggest the recited steps of selectively connecting the first and second receivers to first and second filters, respectively, Applicant requests reconsideration and withdrawal of the rejection of Claims 24 and 26.